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VALUATION OF INTANGIBLE STREET RAILWAY PROPERTY

BY FRANK R. FORD,

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The intelligent regulation of street railway fares, taxation, capitalization and service depends upon the possession of accurate information concerning the value of the property under investigation. Without this knowledge, the governmental authority can do nothing more than form a more or less accurate guess as to the solution of the problem, based largely on *ex parte* testimony, and this, in some cases, will not be just to the company and in some, to the traveling public.

The importance of an accurate valuation of street railway property is now universally recognized. An examination of the history of the serious efforts to place a valuation upon street railway property discloses, in recent cases, a development in the methods of valuation, and the formulation of certain rules and practices which are now becoming standardized.

The valuation of tangible property is an engineering matter of comparative simplicity. An engineer of experience can ascertain, in detail, the expenditure required to duplicate a property having the same physical standards as the one under investigation.

The valuation of intangible property is more involved. The things to be valued are difficult to measure by definite standards, but must be appraised generally by indirect and, in many cases, by inductive methods.

In distinguishing between tangible property and intangible property of the street railway company, the publicly accepted method has been to call one physical property and the other franchises. A careful consideration of the subject, however, will show that there are other items besides franchises which should be included in the term "intangible property."

Physical property is fairly easy to label, inventory and value, so that, it is believed, a correct understanding of the term "intangible

property" can best be had by subtracting from the total property that which is physical, or tangible.

Tangible Property

The physical, or tangible, property includes land, construction, equipment and cash, or its equivalent. If these items are being valued on the basis of either the original cost or the cost of reproduction, they should include the cost of acquiring land, the cost of supervision and administration of the construction by the general contractor, the sub-contractors, the engineers and the company's executive organization. In other words, all labor and expense going to make up the construction of the finished whole should be included, whether this labor be that of day laborers, foremen, superintendents, contractors, engineers or officers and employees of the company. The expenses of such construction work should also include all contingent expenses in connection with such labor, together with such items as interest and taxes during construction, and other overhead charges. In some cases the cost of acquiring land, the administration of construction work by the company's organization, the general contractor's services, engineering expenses and interest and taxes during construction have been considered as intangible property, this distinction being due, presumably, to the fact that in estimates of cost of reconstruction these items have been arrived at by the use of round percentages. Such labor and expense, however, are essential features of the cost of construction and equipment, and consequently belong, strictly speaking, to the tangible property. Stock, tools, supplies and working capital, in whatever form it exists, are also part of the tangible property.

A list of the principal items which enter into the cost of production of the tangible, or physical, property comprises the following:

Work and Expense Items Forming the Tangible Property of a Street Railway

- I. Company's overhead charges upon construction.
 1. Executive organization's work and expenses, including:
 - a. Accounting expenses.
 - b. Office expenses.
 - c. Storeroom and stable expenses.
 - d. Permits of authorities and city inspection.

2. Legal work and expenses.
 3. Technical work and expenses.
 - a. Company's engineering organization.
 - b. Consulting engineers.
 - c. Architects.
 - d. Testing and outside inspection.
 4. Interest during construction.
 5. Taxes during construction.
 6. Wear and tear during construction.
- II. Land, including private right of way and sites for power-houses, car barns, shops, terminals, etc.
1. Assessed value.
 2. Additional market value for ordinary purposes.
 3. Additional value for railroad purposes, including:
 - a. Plottage.
 - b. Contiguity factor.
 - c. Special value for railroad purposes due to location.
 4. Overhead charges for acquisition of land, such as:
 - a. Brokerage.
 - b. Legal work and expenses.
 - c. Technical work and expenses.
 - d. Title insurance.
 - e. Loss on portion of site not necessary.
 - f. Loss of buildings discarded.
- III. General contractor's overhead charges and profits.
1. Work and expenses of contractor's general organization and office.
 2. General superintendence, watching and lights.
 3. Fire, accident and liability insurance during construction.
 4. Maintenance and use of tools.
 5. General contractor's profits.
- IV. Material and labor, comprising the physical construction and equipment, as furnished by the sub-contractors.
1. Inventory, priced on basis of sub-contracts.
 2. Extras, incidentals and contingencies.
- V. Stock, tools and supplies.
1. Inventory, priced.
 2. Incidentals.

VI. Working capital, including :

1. Cash on hand.
2. Accounts and bills receivable.
3. Prepaid accounts.
4. Land and buildings not used in operation.

Intangible Property

All of the remainder of the corporation's property should be considered, as intangible property.

From the standpoint of value, the intangible property represents the total value of the company from a business standpoint, less the value of its physical property. From a standpoint of cost, either first cost or cost of reproduction, the intangible property represents the cost of acquiring rights and capital for producing the tangible property and for placing the company in a potential position for doing business efficiently as a going concern.

Intangible Property from the Standpoint of Cost

From the standpoint of cost of production through the period of development, the intangible property will include many, or all, of the following items :

*Work and Expense Items Through the Period of Development
Forming the Intangible Property of a Street Railway*

I. Promotion of the enterprise.

1. Work and expenses of promoter's organization.
2. Preliminary legal work and expenses.
3. Preliminary technical work and expenses.
 - a. Survey and location of line.
 - b. Estimates of construction cost and of income and expenses.
 - c. Preparation of prospectus.
4. Profits of promotion.

II. Corporate organization.

1. Legal work and expenses.
 - a. Incorporation.
 - b. Details of perfecting legal organization.
 - c. Form of securities.
 - d. Mortgages.

2. Executive organization's work and expenses.
 - a. Directors', officers' and employes' work and expenses (until commencement of construction).
 - b. Office and general expenses (until commencement of construction).
 - c. Engraving securities.
 - d. Registration and certification of securities.

III. Franchises and consents (often under conditions of competition).

1. Property owners' options and consents (for location and for change of motive power).
 - a. Executive organization's work and expenses.
 - b. Legal work and expenses (vacations of injunctions, etc.).
 - c. Technical work and expenses (surveys, maps, etc.).
 - d. Payments for consents.
2. Franchises and consents of municipal authorities (including municipal legislature, mayor, borough presidents, commissioners of bridges, parks, docks, highways, water supply, sewers, etc.).
 - a. Executive organization's work and expenses.
 - b. Legal work and expenses.
 - c. Technical work and expenses.
 - d. Payments for franchises.
 - A. Lump sum.
 - B. Capital expenditures under governmental requirements for property, the title of which does not vest in the company, such as:
 1. Grading and widening streets.
 2. Removing sub-surface street obstructions.
 3. Paving.
 4. Track and overhead line constructed on municipal property, such as parks and bridges.
 5. Change of location of track or line, due to governmental requirements.
3. Consent of state utilities commission.
 - a. Executive organization's work and expenses of presenting project.

3. Extra cost of construction, due to non-interference with operation.
4. Solidification of roadbed.
5. Adaptation of construction and equipment.
- V. Development of company's business.
 1. Losses of early operation.
 2. Losses of outlying sections of line.
 3. Perfection of executive organization and business methods.
 4. Development of park amusement enterprises.
- VI. Consolidation with and control of other corporations.
 1. Corporate consolidation.
 - a. Executive organization's work and expenses.
 - b. Legal work and expenses.
 - c. Payments to state or city.
 - d. Payments for securities.
 - e. Tangible or intangible property of merged corporation which is superseded by consolidation.
 2. Leases of other corporations.
 - a. Executive organization's work and expenses.
 - b. Legal work and expenses.
 - c. Payments to state or city.
 3. Investments in securities of other corporations.
- VII. Financing.
 1. Work and expenses of promoter and associates in negotiation and underwriting.
 - a. Preliminary promotion syndicate or association.
 - b. Stock underwriting syndicate.
 - c. Bond underwriting syndicate.
 2. Sale of securities.
 - a. Permission for issue from state, state commission or municipal authorities.
 - A. Executive organization's work and expenses.
 - B. Legal work and expenses.
 - C. Technical work and expenses.
 - b. Financial negotiations.
 - A. Executive organization's work and expenses.
 - B. Legal work and expenses.
 - C. Technical work and expenses.

c. Payments of commissions to bankers and brokers, representing their work, expenses and profits.

d. Discounts on securities.

VIII. Patents and licenses.

1. Development of inventions.

2. Purchase of patents or licenses.

IX. Interest on work and expense items of intangible property until commencement of operation.

It may be questioned, however, whether a number of the above items should appear in the capitalization of the enterprise. In many cases they have been charged against early income or later profit and loss. As an established industry to-day, it would seem that the allowable return should be high enough to permit the gradual writing off of some of the features of original cost. It would not appear just, however, to present security holders to discredit or destroy capital which was fairly expended for these items, especially if the history of the corporation shows that after deducting profits commensurate with the return on other kinds of business, it would not have been possible to amortize this portion of the principal.

It will be noted that the cost of producing the "going concern" value is included in the above list under items such as "solidification of roadbed" and "adaptation of construction and equipment," under the general heading of "development of technical standards," and also under the heading of "development of the company's business."

In considering the cost of reproduction new of the intangible property, some of the items in the above list disappear. A detailed treatment of this feature will appear below.

Intangible Property From the Standpoint of Value

In appraisals, whether for the acquirement of the property by the municipality, for the fixing of rates, or for the assessment of taxation, the value of intangible property has often loosely been referred to as the value of the franchises, and in such cases the term "franchises" will be understood as synonymous with "intangible property," although, speaking accurately, the latter term includes much more than the former.

Typical instances of valuations of intangible property of street railway systems are furnished by the appraisals in Detroit in 1899,

Chicago in 1906, Cleveland in 1908 and 1909, and Detroit again in 1910.

The Detroit Street Railway Commission Valuation of 1899

One of the first valuations of American street railways took place in Detroit in 1899, under which the State, through a commission headed by Gov. H. S. Pingree, proposed to authorize the city of Detroit to purchase the railways for municipal ownership and operation. The appraisal of the physical property was made by a board of experts, headed by Prof. M. E. Cooley, and totaled \$8,000,000. The value of the franchises was fixed by Prof. E. W. Bemis at \$8,478,563. His computation was made on the basis of capitalizing the net earnings for the remaining life of the franchises after allowing four per cent. annual increase of earnings and deducting four per cent. interest on the \$8,000,000 of physical value. In this case the ratio of this intangible value to the value of the physical plant was one hundred and six per cent.

The Chicago Street Railway Valuation of 1906

In the Chicago case the franchises for some parts of the track had expired, and for other portions lasted for various periods. The expert commission representing the city, headed by B. J. Arnold, apportioned the earnings of the system by franchise expirations on the basis of car mileage operated over each track franchise. The future gross earnings of the unexpired track franchises were then estimated on the basis of an assumed rate of growth of the business until the expiration of the franchises. From these were subtracted the estimated operating expenses, including taxes, based on the present cost of operation. From the resulting net earnings was deducted interest at the rate of five per cent. on the estimated value of physical property corresponding with the franchise section, which physical property was proportioned in accordance with the car mileage operated over each franchise. The resulting net income of each franchise was then discounted as of the present date and capitalized at five per cent.

There was a dispute as to the length of the remaining franchises, and the valuations submitted to the City Council by its experts were based on various franchise periods from twelve months to thirty-six months. The total value finally agreed upon for all of these prop-

erties was \$50,000,000, which corresponds most nearly with the value of the property if the franchises are given an average remaining period of eighteen months. On this basis the total value of the physical property, including paving, is \$41,977,811, and the value of the intangible property \$9,016,971, making a total value of \$50,994,782. It will be noted that the value of the intangible property in this case is over twenty-one per cent. of the value of the physical property.

As a matter of fact, the proportion of intangible property in the final value was considerably more than this percentage, due to the fact that the cable systems were valued largely as going concerns. If the cable property, however, was valued according to its availability in converting these lines into part of an electric system, there would be deducted from the physical value \$4,794,618. Reducing the physical value by this amount, and adding the same amount to the value of the intangible property, would result in values of physical property of \$37,183,200, and of intangible property of \$13,811,582, so that on this basis the intangible value represents over thirty-seven per cent. of the physical value.

The experts of the city also included in their physical property valuation an item of ten per cent. upon the total construction cost to cover the general classifications of (1) legal expenses, including those incurred in securing right of way and frontage consents; (2) interest during construction; (3) brokerage, or the expense of securing the necessary moneys; (4) contingencies and other items of expense. This allowance is generally believed to have been insufficient.

Part of these expenditures undoubtedly belong under the heading of intangible property, and if we assume that Items 1 and 3, or one-half of this ten per cent., were so classified, we add \$1,690,145 to the intangible value, which thus becomes over forty-three per cent. of the physical value.

The Cleveland Street Railway Valuations of 1908 and 1909

In the Cleveland valuation of 1908, the negotiations were conducted by Mayor T. L. Johnson, for the city, and F. H. Goff, for the company, and the physical valuations were made by committees headed by A. B. du Pont and H. E. Andrews. The value of the physical property, after deducting depreciation, was found to be

\$15,034,614. This amount included a charge for the legal organization of the company, which should be classed as intangible property, amounting to \$40,000. Deducting this sum would leave the net physical value \$14,994,614. The value of the franchises and good will agreed to was \$8,954,985, to which we should add the above-mentioned \$40,000, giving an aggregate total intangible value of \$8,994,985. In this case, therefore, the ratio of intangible to physical property was sixty per cent. This ratio is probably larger than it should fairly have been, as the physical value was unreasonably lowered and depreciated.

Judge R. W. Tayler, who was the arbitrator in the final settlement of this Cleveland valuation in 1909, recognized this low estimate of physical value by increasing the estimate as of the same date (January 1, 1908) to \$17,511,856. He reduced the intangible value, however, on that date by decreasing the franchise value to \$3,615,844, and eliminating entirely the item of "good will," and transferring the item of "going value" to the classification of "physical property." After shifting the \$40,000 of intangible value mentioned above from the physical to the intangible value, we find that the ratio of intangible to physical value is twenty-one per cent. This figure, however, would be further enlarged if it were possible to secure the details of certain items included by Judge Tayler in his physical value, inasmuch as he added a general overhead charge of fifteen per cent. to include a number of development expenses, some of which, such as financing, organization, consents and litigation with property owners, would come under the class of intangible property as above defined. It is probable, therefore, that the ratio, under Judge Tayler's valuation, is considerably over twenty-five per cent.

The Detroit Street Railway Commission Valuation of 1910

The valuation of property of the Detroit United Railway, made in 1910 by the committee of fifty appointed by Mayor Philip Breitmeyer, has created much interest in the street railway world. This valuation of physical property was made by a number of experts, under the supervision of F. T. Barcroft, who found that the total value of the physical property was \$11,121,725.

The valuation of unexpired franchises was made by Prof. H. C. Adams, and amounted to \$2,810,615. This was based on the some-

what inaccurate method used in the Chicago franchise valuation, of proportioning gross earnings by franchises on the basis of the car mileage operated over each franchise. It also allowed for no increase of gross and net earnings during the remainder of the franchises, which in some cases did not terminate for twenty-five years. The ratio of intangible to tangible property as thus developed is equal to slightly over twenty-five per cent.

Professor Adams also presents an estimate of the value of these franchises on the basis of assuming six per cent. increase of gross earnings per year of the unexpired term. On this basis the franchise value would be \$4,246,208, which would equal over thirty-eight per cent. of the physical value. This ratio, however, would seem to be somewhat larger than fairness would justify, as the valuation of the physical property made by the experts of the company was \$24,676,182, or more than double the Barcroft valuation.

*Intangible Property From the Standpoint of Cost of
Reproduction New*

In order to view the subject of value of a street railway property from the standpoint of cost of reproduction, the usual method has been to endeavor to ascertain the cost of reproduction of the physical property, depreciated to present condition. For some uses, such, for instance, as in a rate case, it is believed to be fairer and more satisfactory to ascertain the cost of reproduction new of the entire property. This is the amount which a competing enterprise would cost to produce and upon which its rate of fare would be based. The public is not interested in the amount of depreciation of physical property if it is well maintained in condition to give good service. There would be an economic waste if such depreciation were repaired.

It has been suggested that the normal depreciation which is present in every operating property be regarded as an offset to the "going concern" value of the property. A street railway property, upon the commencement of operation, has to go through a period of adaptation of the component parts of the physical construction and equipment, both as to each other and as to their joint uses in the business, whereby the mistakes of design and construction are eliminated. Similarly, the legal and executive organization of the company must be got into smooth and efficient working order,

and furthermore, what may be most important, the business and income of the company must be developed through a period of at least several years to a point which will prove the success of the company as a profitable enterprise. This assurance of its technical, operating and business practicability is the "going concern" value of the property. If, therefore, the "going concern" value equals the amount of depreciation, we arrive again at the cost of reproduction new as an important and in some cases a controlling element in the valuation of a street railway property.

The items forming the cost of reproduction new of the physical property have already been considered. In order, however, to produce this tangible property, it is necessary to reproduce both the rights under which it is constructed and by which it may operate, and the financing which pays for the production of both tangible and intangible property.

For any given company or system we must imagine that the streets are clear of its tracks and that we begin with the inception of the enterprise in the mind of a promoter or business pioneer. This man and his associates, for the development of the enterprise up to the construction period, in the case of a large company, will employ a working force of lawyers, engineers and an executive organization. The securing of public rights and private capital, often under conditions of competition with other transportation interests, must be considered from the standpoint of local conditions, customs and laws.

Inventory of Work and Expense Items of Reproduction of Intangible Property

It is believed that the first instance that this theory has been worked out in careful detail was the Coney Island fare case of the Coney Island and Brooklyn Railroad Company, before the Public Service Commission of the First District (New York City). As technical advisers to the company, my firm there made up a list, or inventory, of the work and expense items comprised in the reproduction new of the intangible property of that company. This inventory, in brief, sets forth the time and expense items of all departments of the organization, of the promoter and of the company, first, during the promotion period, or time of obtaining rights and capital, and then during the construction period, or time of

expenditure of capital, to the completion of construction. These items are separated as between the promoter's organization, the legal department and the technical department, through the preliminary development of the idea, the formation of the promoter's syndicate, the securing of the corporation's charter and the obtaining of its franchise from the municipal body and of its certificates from the Public Service Commission, together with the property owners' consents and those required from the minor city departments and other corporations. The time spent in connection with financing the enterprise is largely co-extensive with that of obtaining rights and comprises the various steps of underwriting and negotiating the sale of securities. After the franchises and capital are obtained, the construction period begins by the organization of the permanent working force of the company, and continues through the general administration of the construction work by this executive organization to the completion of construction. This inventory, as submitted in the case, is reproduced on pages 134-140 as Exhibit No. 1.

Time of Reproduction

In order to determine the time spent on each part of this work, and the contemporaneous nature of a large part of it, there was prepared a chart of estimated time of reproduction sub-divided as between the various departments. The estimated time taken for each part of the work was based upon the actual time which has recently been required to secure similar rights in New York City under present legal restrictions. It was estimated that three and one-half years would be required from the inception of the project to the time that capital and rights would be obtained. The construction period was estimated, from instances of recent construction work, to require two years and ten months' additional time, making a total of six years and four months, although the beginning of partial operation was assumed to take place one year before the end of construction. The chart of estimated time of reproduction is shown opposite page 140 as Exhibit No. 2.

Estimated Cost of Reproduction

The number of men in each department and their rates of pay were then assumed, producing, when allowance had been made for general expense items, the total expenditure in each department and

for each part of the work. All of this was, as far as possible, based upon actual similar work and expenditure of other corporations. The resulting estimated cost of each general item of the tangible and intangible property is shown in Exhibit No. 3 (page 141).

In this case the ratio of intangible property to tangible property is \$779,700 to \$8,520,198, or slightly over nine per cent. There are, however, a number of items, such as profits of promotion, discounts and commissions on sale of securities, etc., which were specifically excluded in this estimate, as it was claimed that these items should be allowed for in a rate of return higher than the interest rate of six per cent., rather than in a principal value. For these items, the experts of the Public Service Commission estimated the minimum cost of reproduction at \$976,490, and the maximum cost at \$1,973,938, equivalent to over eleven per cent. and twenty-three per cent., respectively, of the above cost of reproduction of tangible property. The same reasoning would apply to other items for which no claims were made by either side, such as features of value of the present franchise of this company that cannot be reproduced, the cost of development of the business, represented by the deficiency below a reasonable return due to deficits of early operation, and the cost of development of technical standards, comprising obsolescence of the horse system and of the early electric system. If the rate of return on the valuation of the street railway property be fixed as low as six per cent., allowance should also be made for this class of expenditure of capital in the principal amount of cost of reproduction new.

In conclusion, it would appear from this general survey of the field of street railway valuation, that there are elements of value in the street railway property, whether called by the terms "intangible property," "franchises," "earning power," "good will" or "going concern," which can be measured by methods more or less exact, and which have been appraised in recent notable instances at from twenty-five per cent. to over one hundred per cent. of the value of the physical property.

EXHIBIT No. 1

CONEY ISLAND & BROOKLYN RAILROAD COMPANY INVENTORY OF WORK AND EXPENSE ITEMS OF REPRODUCTION NEW AS OF AUGUST 31, 1909, OF INTANGIBLE PROPERTY ACQUIRED DURING PROMOTION PERIOD

PROMOTER'S ORGANIZATION.

Preliminary

Study of situation.
Preparation of general data.
General investigation of laws.
Interesting other parties.
Meetings and correspondence.

LEGAL DEPARTMENT.

Conferences and correspondence with promoter covering general state and local transportation laws.

TECHNICAL DEPARTMENT.

Conferences and correspondence with promoter.
General examination and memorandum on situation.

PROMOTER'S SYNDICATE

Formation.
Meetings.
Consultations with attorneys and engineers as to general plans and procedure.
Conferences and correspondence with engineers on report, revision of plans, supplementary reports, etc.
Conferences and correspondence with attorneys on legal procedure, etc.
Plans and estimates for early financing.
Outline of financial plans.

Conferences and correspondence with promoter as to plans for syndicate, proposed agreement, etc.
Draft of agreement and revision.

Attendance at meetings of syndicate.
Examination of and report on statutes, ordinances, etc., relating to street railways.

Consultations with promoter as to plans and legal procedure.

Formal report, involving:

Study of population, its growth, density and direction of movement, etc.

Study of traffic; other companies, competing and non-competing, and for this situation; possibility of development, etc.

Selection of route, with alternatives.

Selection of power house and car barn sites.

Estimates of cost of construction and equipment under different plans.

Estimates of gross earnings and operating expenses under different plans for a period of years.

Study of operating agreements with other companies.

Maps, profiles, plans, etc.

ARTICLES OF ASSOCIATION AND CERTIFICATE OF INCORPORATION

Consultations with attorneys.
Consultations with engineers.
Meetings of incorporators.
Meetings of directors.
Preparation of papers for filing with Secretary of State.
Collection of subscriptions of not less than \$1,000 per mile and affidavits thereto.

Examination of statutes.
Consultations with promoter and engineers.

Organizing and conducting meeting of subscribers to articles of association.

Preparation of papers for filing with Secretary of State.

Preparation of minutes, by-laws, etc., and conducting regular meetings of directors and stockholders.

Attendance at Albany.

Conferences and correspondence with promoter and attorneys.

Preparation of papers for filing with Secretary of State.

PROMOTER'S ORGANIZATION.

LEGAL DEPARTMENT.

TECHNICAL DEPARTMENT.

State and Local Authorities

PREPARATORY

Conferences and correspondence with attorneys and engineers on form and procedure.

Planning campaign and organizing force.

Conferences and correspondence with promoter and engineers on form and procedure.

Conferences and correspondence with promoter and attorneys.

BOARD OF ESTIMATE AND APPOINTMENT. (a) APPLICATION

Conferences and correspondence, formal and informal with members of Board and its engineers, other than at regular hearings.

Preparation of data and reports on local companies and comparisons in other cities relative to franchises.

Revision and amendments of application.

Conference and correspondence with attorneys and engineers relative thereto.

Preparation of application. Conferences and correspondence, formal and informal, with members of Board, etc., other than at regular hearings.

Revision and amendments of application.

Conferences with promoter and engineers relative thereto.

Conferences with promoter and attorneys.

(b) FIRST PUBLIC HEARINGS

Publicity campaign, editing newspaper advertisements, circulars, etc.; attending meetings of property owners commercial bodies and others.

Attendance (reference to select committee).

Preparation for further hearings, additional data, etc., to meet objections.

Conferences and correspondence with attorneys and engineers relative thereto.

(The above items for each hearing.)

Securing attendance of experts for testimony.

Preparation.

Attendance.

Conferences and correspondence with promoter on results.

Preparation for further hearings.

Preparation of data and papers.

Attendance.

Conferences and correspondence with Board's engineers.

Preparation of additional data.

Conferences and correspondence with promoter and attorneys.

(c) MEETINGS OF SELECT COMMITTEE

Attendance.

Preparation of data.

Examination of proposed modifications and amendments to franchise, including:

Revision of estimates and plans and preparations of counter proposals, etc.

Conferences and correspondence with attorneys and engineers relative thereto.

Securing attendance of experts for testimony.

Appearance.

Preparation of data.

Examination of proposed modifications and amendments, etc.

Conferences and correspondence with promoter and engineers.

Conferences and correspondence with Corporation Counsel.

Attendance.

Revision of plans and estimates, maps, etc.

Conferences with promoter and attorneys.

(d) FINAL HEARING

(Same items as for first hearing.)

(Same items as for first hearing.)

(Same items as for first hearing.)

APPROVAL OF MAYOR.

Attendance before Mayor.

Attendance before Mayor.

Attendance before Mayor.

CERTIFICATE OF PUBLIC SERVICE COMMISSION

Preparation of petition and papers required.

Preparation for hearing.

Conferences and correspondence with attorneys and engineers relative thereto.

(At this hearing applicant must prove necessity, bona fides of enterprise

Preparation of petitions and papers required.

Preparation for hearings.

Conferences and correspondence with promoter and engineers.

Preparation of data and estimates.

Conferences and correspondence with promoter and attorneys.

Testimony and attendance at hearings.

PROMOTER'S ORGANIZATION.

and financial ability to carry out enterprise.)

Attendance at hearing.

Attendance at subsequent hearings (adjournments).

Preparation of further data and information.

Conferences and correspondence with commission, formal and informal.

Conferences and correspondence with attorneys and engineers relative thereto.

APPROVAL OF CAPITALIZATION BY PUBLIC SERVICE COMMISSION

Preparation of papers and data for hearing.

Conferences and correspondence with attorneys and engineers relative thereto.

Conferences and correspondence, formal and informal, with members of commission.

Attendance at hearing.

Examination of testimony and preparation of additional data and papers for further hearings.

Conferences and correspondence with attorneys and engineers relative thereto.

Attendance at subsequent hearings.

Property Owners' Consents and Options**PROPERTY OWNERS' CONSENTS**

Attending meetings of property owners.

Conferences and correspondence with attorneys.

Conferences and correspondence with chief solicitor.

Personal attention to large property owners.

General supervision of work.

Preparation and inspection of tax lists.

Conference with attorneys relative to legal proceedings to secure consents.

Preparation for and attendance at trials.

RIGHT-OF-WAY OPTIONS

Conferences with engineers and attorneys on recommended private right-of-way routes.

Inspection of properties, investigation as to availability, names and location of present property owners, prices of real estate, etc.

Conferences and correspondence with attorneys and real estate brokers covering form and securing of options, etc.

REAL ESTATE OPTIONS

Inspection of recommended car barn and powerhouse, etc., sites.

Conferences and correspondence with engineers.

LEGAL DEPARTMENT.

Appearances at hearings.

Preparation for hearing.

Conferences and correspondence with promoter and engineers.

Conferences and correspondence with members of Commission.

Appearance at hearing.

Examination of testimony and preparation of additional data.

Conferences and correspondence with promoter and engineers.

Attendance at subsequent hearings.

Attendance in payment of capital stock tax.

TECHNICAL DEPARTMENT.

Conferences and correspondence with commission's engineers.

Preparation for hearing.

Conferences and correspondence with promoter and attorneys.

Conferences and correspondence with Commission and its engineers.

Attendance at hearing.

Examination of testimony and preparation of additional data.

Attendance at subsequent hearings.

Preparation of petitions and releases.

Conferences and correspondence with promoter.

Tax lists and preparation, etc.

Attending meetings.

Preparation for legal proceedings to secure consent.

Conferences and correspondence with promoter.

Attendance at trials.

Organizing solicitors.

General maps showing owners and frontage.

Individual plans to accompany transfers.

Conferences and correspondence with promoter.

Form of options, etc.

Meetings with vendors' attorneys.

Conferences and correspondence with promoter, inspection of recommended properties, etc.

(Same as for right-of-way.)

Surveys to determine availability.
Estimates of comparative economy.

PROMOTER'S ORGANIZATION.

Conferences and correspondence with real estate brokers.
 Conferences and correspondence with attorneys on form of options.
 Meeting with vendors.
 (Option would probably be obtained on property not used in final design.)

Other Rights and Consents**COMMISSIONER OF BRIDGES**

(The general right to operate over the East River bridges would be covered by Board of Estimate and Apportionment, but details of operation would be arranged and directed by the Commissioner of Bridges.)

Application to commissioner, with outline of proposed operation, type and weights of equipment, track and overhead construction.

Conferences and correspondence with attorneys and engineers relative thereto.
 Meetings with commissioner.

Conferences and correspondence with other companies using bridges.

Examination of contracts.

COMMISSIONER OF PARKS

Conferences and correspondence with commissioner to obtain consent to franchise, approval of proposed type of track construction, design and location of poles, paving, grades, etc.

Conferences and correspondence with attorneys and engineers relative thereto.

BOROUGH PRESIDENT

Conferences and correspondence with borough president and his engineers to obtain approval of proposed type of construction, location of poles, paving, grades, etc., including submission of plans and specifications.

Conferences and correspondence with attorneys and engineers relative thereto.

TRACKAGE AND OTHER AGREEMENTS WITH CORPORATIONS

Meetings with officials.

Conferences and correspondence with attorneys and engineers.

Consent of Public Service Commission and Board of Estimate and Apportionment.

Estimates of costs, rentals, etc.

Preparation and examination of agreements.

LEGAL DEPARTMENT.

Conferences and correspondence with promoter and engineers relative thereto.

Meetings with commissioner and his attorneys.

Conferences and correspondence with other companies using the bridges.

Examination and approval of contracts.

Conferences and correspondence with commissioner and his attorneys.

Conferences and correspondence with promoter and engineers.

Conferences and correspondence with borough president and his attorneys.

Conferences and correspondence with promoter and engineers.

Attendance at meetings with officials of other corporations.

Conferences and correspondence with promoter and engineers.

Consent of Public Service Commission and Board of Estimate and Apportionment.

Tentative agreements.

Final agreements.

Attendance at execution of agreements.

TECHNICAL DEPARTMENT.

Study of bridge operating conditions, with recommended plans for operation, estimates of earnings, maps, plans, etc.

Conferences and correspondence with promoter and attorneys.

Meetings with commissioner or his engineers.

Conferences and correspondence with other companies using bridges.

Examination and report on contracts.

Conferences and correspondence with commissioner and his engineers.

Conferences and correspondence with promoter and attorneys.

Plans and estimates.

Conferences and correspondence with borough president and his engineers regarding proposed construction, grades, paving, etc.

Conferences with promoter and engineers.

Maps, plans and estimates.

Attendance at meetings with officials of other corporations.

Conferences and correspondence with promoter and attorneys.

Opinion on form of proposed agreements.

Preparation of data for use before Public Service Commission and Board of Estimate and Apportionment.

Attendance at hearings.
 Estimates on equity agreements.

Financing**PROSPECTUS**

Preparation of and editing.

Conferences and correspondence with attorneys and engineers relative thereto.

Conferences and correspondence with promoter and engineers.

Preparation of condensed opinion for use in prospectus.

Conferences and correspondence with promoter and attorneys.

Preparation of letter for use in prospectus.

PROMOTER'S ORGANIZATION.**LEGAL DEPARTMENT.****TECHNICAL DEPARTMENT.****NEGOTIATIONS WITH BANKERS
AND INVESTORS**

Detailed plans for financing.
Conferences and correspondence with
attorneys and engineers relative thereto.

Detailed plans for financing.
Conferences and correspondence
with promoter and bank-
ers.

Conferences and corre-
spondence with promoter
and attorneys as to plans.

**(a) STOCK UNDERWRITING SYN-
DICATE**

Interesting investors.
Tentative agreement.
Meetings and conferences working
toward final agreement.
Plans for carrying out provisions of
agreement, collection of subscriptions,
voting trusts, interim and participation
certificates, etc.
Conferences and correspondence with
attorneys and syndicate relative thereto.

Conferences and correspond-
ence with promoter.
Preparation of tentative
agreement.
Attendance at meetings be-
tween promoter and syndicate.
Final agreement.
Conferences and correspond-
ence on form of certificate
and preparation of form.
Attendance in execution of
agreement.
Participation certificates, in-
terim certificates, etc.

Attendance with pro-
moter at meetings.
Special estimates.

**(b) BOND UNDERWRITING SYNDI-
CATE**

Interesting bankers.
Conferences and correspondence with
their engineers.
Tentative agreement.
Meetings and conferences working
toward final agreement.
Plans for carrying out provision of
agreement, collection of subscriptions,
voting trusts, interim and participation
certificates, etc.
Conferences and correspondence with
attorneys and syndicate relative thereto.

Conferences and correspond-
ence with promoter and en-
gineers.
Preparation of mortgage
and trust deed.
Search of titles.
Preparation of tentative
agreement.
Attendance at meetings be-
tween promoter and syndicate.
Final agreement; interim
certificates, participation cer-
tificates, agreements.
Attendance in execution of
agreement.

Attendance with pro-
moter at meetings.
Conferences and corre-
spondence with promoter
and attorneys in regard to
mortgage and trust deed.
Preparation of data for
use therein.
Special estimates.

**FORMAL ENDING OF PROMOTION
PERIOD**

Transfer of papers and documents.
Execution of releases, assignments,
etc.

Transfer of papers and
documents, execution of re-
leases, assignments, etc.

INVENTORY OF EXPENSES DURING PROMOTION PERIOD.**PRELIMINARY**

Assistants' time.
Stenographers' time.
General office expenses:
Rent, light, etc.
Postage, telephone and telegrams.
Books—record, statistical, legal, etc.
Files and office furniture.
Miscellaneous.
Traveling.

Typewriting.
Notary fees.
Recording fees.
Certified copies.
Traveling expenses.
Directors' fees.
Printing.
Miscellaneous.
Fees to state.
Copies of consents, decrees,
etc.

Time and expenses of
engineers, draftsmen and
other assistants.
Typewriting and other
expenses.

PROMOTER'S SYNDICATE

Chief assistant to promoter.
Assistant as to engineering.
Assistant as to accounting and
statistics.
Record clerks (including bookkeep-
ing).
Stenographers (including filing).
Chief consent solicitor:
Assistants.

Transcripts of minutes.
Tax lists.
Trustees' legal expenses.
Retainers in special suits.
Directors' and executive
committee fees.

PROMOTER'S ORGANIZATION.

Allowance to other members of promoter's syndicate for time and expenses.
 General office expenses:
 Rent, light, etc.
 Postage, telephone and telegrams.
 Books—record (minutes, etc.; accounts, etc.).
 Filing system.
 Office furniture (including typewriters, adding machine, etc).
 Printing and stationery.
 Miscellaneous.
 Publicity expenses.
 Traveling.
 Expenses of promotion syndicate, including their attorneys and engineers.
 Interest on money raised by promoters.
 Premium on security bonds, employees and for franchise, etc.

LEGAL DEPARTMENT.

FRANCHISES AND OPTIONS

Payments to property owners for consents.
 Lump sum payments for franchise.
 Payments for options of real estate.
 Commission and expenses of real estate broker in securing options.
 Payments to title company for lists of property owners and details in connection with properties.
 Publication required by law.

TECHNICAL DEPARTMENT.

INVENTORY OF COST OF REPRODUCTION NEW, OF INTANGIBLE PROPERTY ACQUIRED DURING CONSTRUCTION PERIOD. (EXCEPT TECHNICAL DEPARTMENT AND CONTRACTOR.)

PERMANENT ORGANIZATION.

STOCKHOLDERS' MEETINGS

Election of directors and officers; approval of stock and bond issues, agreements, by-laws, seal, etc.

DIRECTORS' MEETINGS

Reports of committees and officers; approval of contracts, specifications, etc.; considering and directing in matters affecting the company's plans, etc.

EXECUTIVE COMMITTEE MEETINGS

Practically same as above, but with greater detail and more frequent meetings.

PRESIDENT

Supervision and direction of all matters in connection with construction, such as:

Examination and approval of plans and specifications.

Execution of contracts.

Conferences and correspondence with city officials in securing permits and removing obstructions to company's plans.

Conferences and correspondence with officials of other companies regarding crossings and other matters of mutual interest (grade crossings, etc.).

Trips to other cities to examine types of construction, method of operation, etc.

Conferences and correspondence with financial syndicates. Unfavorable markets for securities might necessitate issuance of short-term obligations with attendant expense of Public Service Commission approval, selling, etc.)

Conferences and correspondence with attorneys and engineers on matters of construction.

LEGAL DEPARTMENT.

GENERAL COUNSEL

Examination and approval of contracts.

Preparation of resolutions, etc., for meetings.

Advice and direction in matter of securing permits from authorities.

Conferences and correspondence with city officials in regard to permits.

Conferences and correspondence with other companies regarding construction, etc.

Temporary injunctions and other legal procedure against interference with construction, etc., by

City officials and departments.

Other corporations, street railway, steam railway,

telephone, electric, gas.

Unions on strike.

Property owners.

Hearings and orders in the above.

Defending and instituting suits for damages to property.

Conferences and correspondence relative thereto.

Suits and other legal proceedings against contractors and others for non-fulfilment of obligations to company.

Conferences and correspondence relative thereto.

Suits and other legal proceedings in matters of disputed accounts, etc.

Conferences and correspondence relative thereto.

TECHNICAL DEPARTMENT.

(Usual details.)

PERMANENT ORGANIZATION.

Securing modifications of franchises, certificate of convenience and necessity and permits, such as extensions of time, alterations of layout and design, etc., including the approval of various city officials and departments.

Signing securities, checks, etc.

Hearing and investigating complaints.

SECRETARY-TREASURER

All duties usual to the office of secretary-treasurer.

AUDITOR

All duties usual to the office of auditor.

LEGAL DEPARTMENT.

Preparation of certificates of expenditures for trustees, etc.

Personal injury suits; employees; public.

Preparation for and appearances in securing modifications of franchises and permits.

Crossing and track elevation controversies and litigation with steam railroads.

TECHNICAL DEPARTMENT.**INVENTORY OF EXPENSES DURING CONSTRUCTION PERIOD.****GENERAL**

Fees to directors and executive committee.

Salaries of general officers.

Salaries of clerks.

Rent of offices, light, etc.

Consulting auditor developing accounting system.

General books and records.

Printing and stationery.

Filing system.

Traveling expenses.

Recording fees.

Traveling and other expenses in connection with securing appointive officers.

Traveling and other expenses of appointive officers.

Miscellaneous.

Retainers and fees to special counsel.

Fees to experts for testimony.

Court costs and witness fees.

Notary services.

Expenses of special counsel and experts, including traveling.

Payments for damages.

(Usual details.)

FINANCIAL

Engraving stock certificates including interim certificates and all expenses of delivery and storage.

Engraving bonds, including interim certificates and all expenses of delivery and storage.

Services of trustee in certification.

Obtaining subscriptions.

Registration books and records (in duplicate in company's and transfer agent's offices).

Issuing certificates.

Listing on stock exchanges.

Discount on securities.

Commissions to syndicates.

Cost of temporary loans.

Cost of short-term loans.

Exchange.

CITY PERMITS AND INSPECTION

Fees.

Inspectors' salaries.

Water charges.

Payments for special privileges.

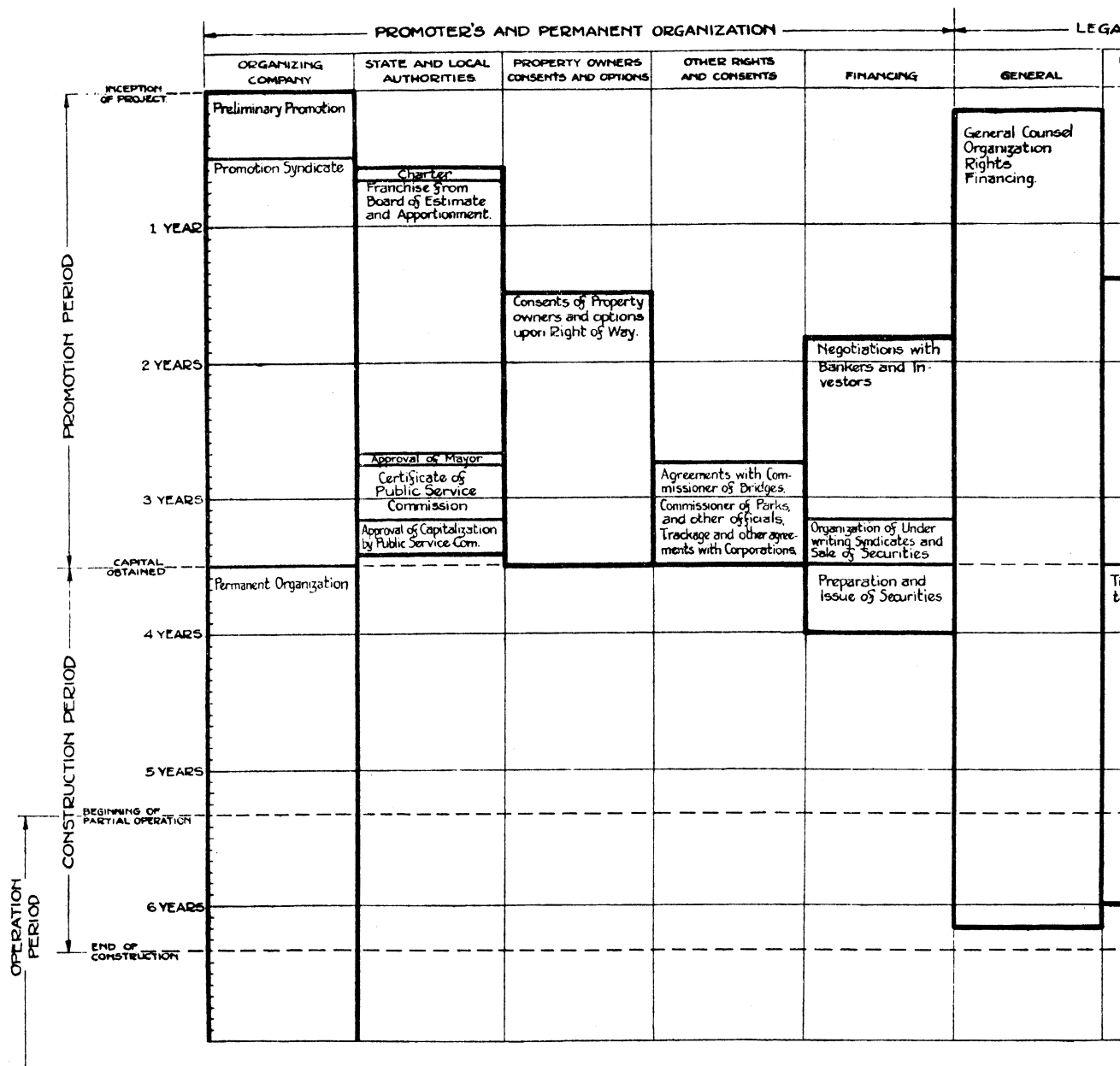


EXHIBIT 2.—CHART OF ESTIMATED TIME OF REPRODUCTION, CONEY ISLAND

LEGAL DEPARTMENT				TECHNICAL DEPARTMENT	CONTRACTOR	
FINANCING	GENERAL	REAL ESTATE AND RIGHT OF WAY	CONSTRUCTION	ENGINEERING	CONSTRUCTION	INCEPTION OF PROJECT
	General Counsel Organization Rights Financing.			Preliminary Estimates and Plans		
				General Engineering Design		
				Evidence and Advice		
		Options, Searches and Consents.				
Negotiations with Bankers and In- vestors						
Organization of Under- writing Syndicates and Sale of Securities						
Preparation and Issue of Securities		Titles and Condemna- tion Proceedings.		Detailed Design Engineering Inspection and Supervision		CAPITAL OBTAINED
			Construction Contracts Injunctions and Claims		Purchase of Material. Construction Work.	
						BEGINNING OF PARTIAL OPERATION
						END OF CONSTRUCTION

EXHIBIT 3.—ESTIMATED COST OF REPRODUCTION NEW OF THE PROPERTY OF THE CONEY ISLAND & BROOKLYN RAILROAD
COMPANY AS AN ADEQUATE MODERN SYSTEM AT AUGUST 31, 1909.

Valuation of Intangible Street Railway Property

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Item	Method of Estimate	Tangible Property	Intangible Property	Total Estimate
PROMOTION PERIOD. (Obtaining rights and capital).				
1. Promotion expense:				
a. Promoter's organization - time and expenses -	Inventory priced		\$231,100	
b. Legal expenses - time and expenses -	Inventory priced		103,500	
c. Real estate department - time and expenses -	Inventory priced		86,600	\$ 421,200
d. Property owners' consents -	Estimated		278,300	278,300
Total, promotion period -			\$699,700	\$ 699,700
CONSTRUCTION PERIOD. (Expenditure of capital to completion of construction.)				
3. Permanent organization - time and expenses -	Inventory priced	\$ 115,640	\$ 80,000	\$ 195,640
4. Cost of land:				
a. Sites for power house, substations, car barns, shops, yards and terminals:				
Assessed value -		187,800		
Additional sales value (including contract for Coney Island terminal) -	Appraisal	266,300		454,100
b. Right of way on Coney Island Avenue:				
Assessed value -		290,000		
Additional sales value and cost of acquiring -	Add 150 per cent -	435,000		725,000
c. Cost of acquiring land (sites only) -	10 per cent of 4a.	45,400		45,400
5. Cost of construction and equipment (sub-contracts) as of Feb. 1, 1909:				
6. Cost of construction and equipment on bridges and fill on Coney Island Ave. right-of-way -	Estimate of Public Service Commission's experts -			
a. Track -		829,325		
b. Track, special work -		219,835		
c. Paving -		363,159		
d. Overhead trolley construction -		132,696		
e. Overhead feeders -		100,575		
f. Return conductors and cables -		305,780		
g. Power plants and substations (including power house cribbing and old intake) -		733,721		
h. Buildings -		637,263		
i. Rolling stock -		353,463		
j. Incidentals -		276,450		
Detailed estimate -				4,892,298
7. General contractor's overhead charges and profit -	10 per cent of Item 6 -	489,230		489,230
8. Engineering and taxes, during construction -	5 per cent of 6-7 -	289,076		289,076
9. Detailed estimate -	Detailed estimate -	561,945		561,945
10. Miscellaneous stock, tools and fixtures:				
a. Inventory -	Estimate of Public Service Commission -			
b. Incidentals -	5 per cent of 10a.	103,680		103,680
Estimated -		5,184		108,864
11. Working capital -	Estimated -	\$ 250,000		\$ 250,000
Total, construction period -		\$7,910,953	\$ 80,000	\$7,990,953
Total cost of reproduction new at Feb. 1, 1909 -		\$7,910,953	\$779,700	\$8,690,653
12. Additions and betterments from Feb. 1, 1909 to Aug. 31, 1909 -	Actual cost -	39,549		39,549
13. Additions and betterments necessary to produce an adequate, modern system -	Detailed estimate -	569,696		569,696
Total cost of reproduction new at Aug. 31, 1909, of an adequate, modern system -		\$8,520,198	\$779,700	\$9,299,898